



Utah Water Assessment & Conditions Monitoring (Drought Webinar)

The meeting will begin shortly



Thank you to our contributors



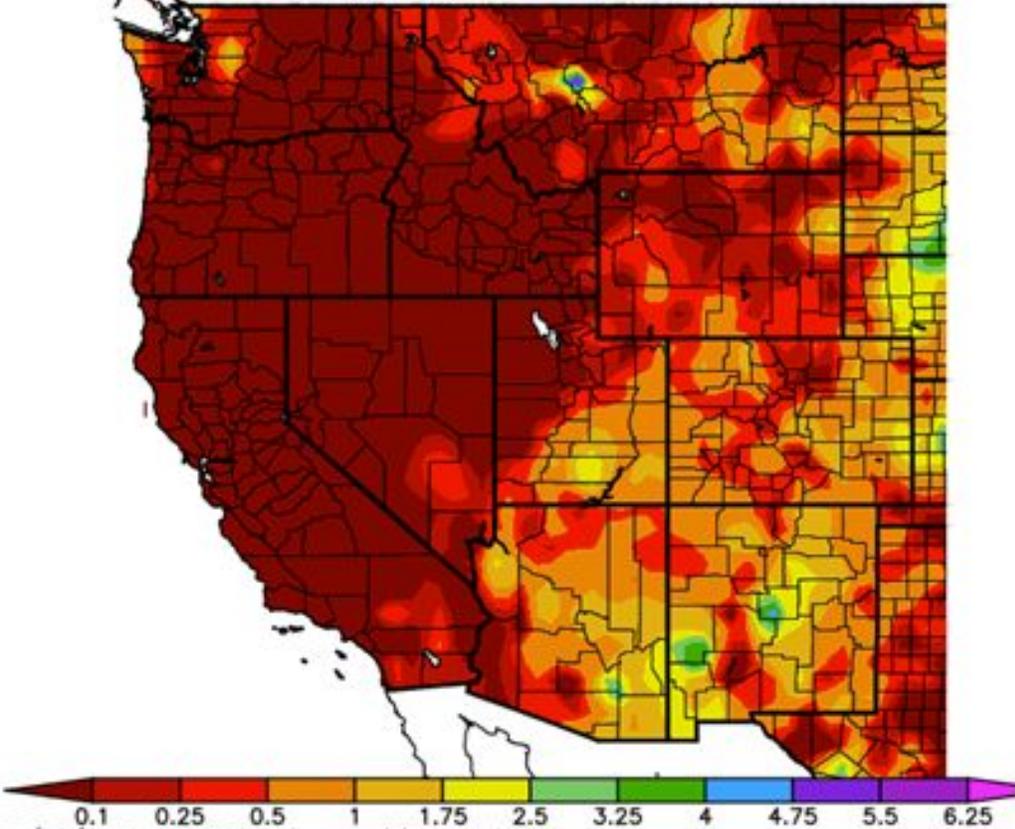


Utah Water Assessment & Conditions Monitoring Webinar

September 7, 2021

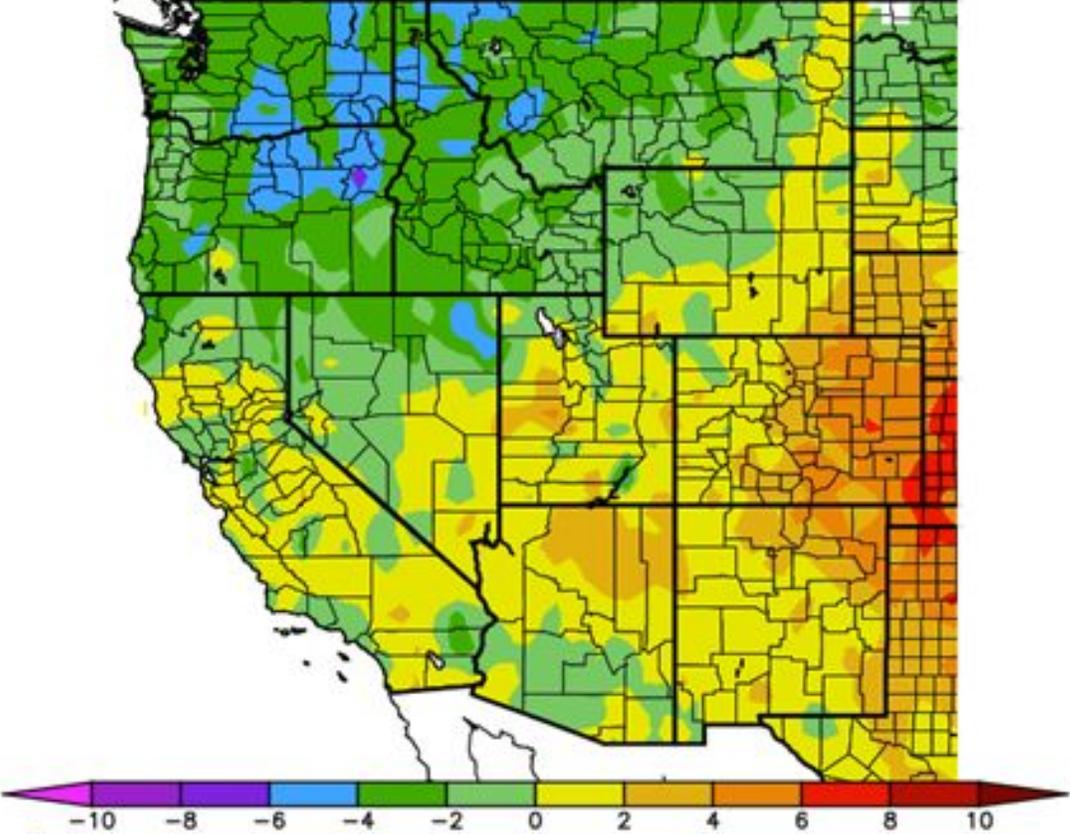
Two-Week Climate Summary

Total Precipitation (in.)
8/23/2021 - 9/5/2021



Generated 9/ 6/2021 at WRCC using provisional data.
NOAA Regional Climate Centers

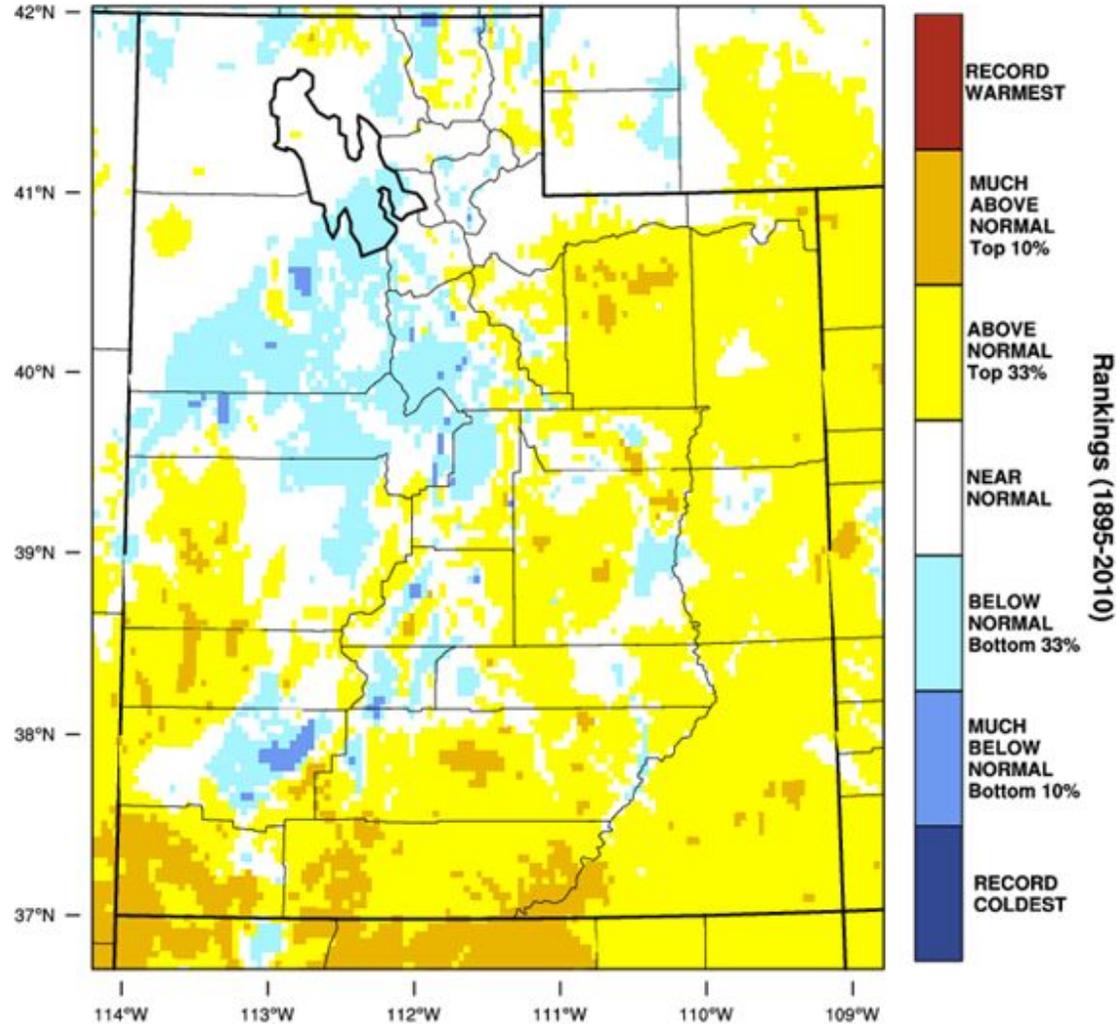
Ave. Temperature dep from Ave (deg F)
8/23/2021 - 9/5/2021



Generated 9/ 6/2021 at WRCC using provisional data.
NOAA Regional Climate Centers

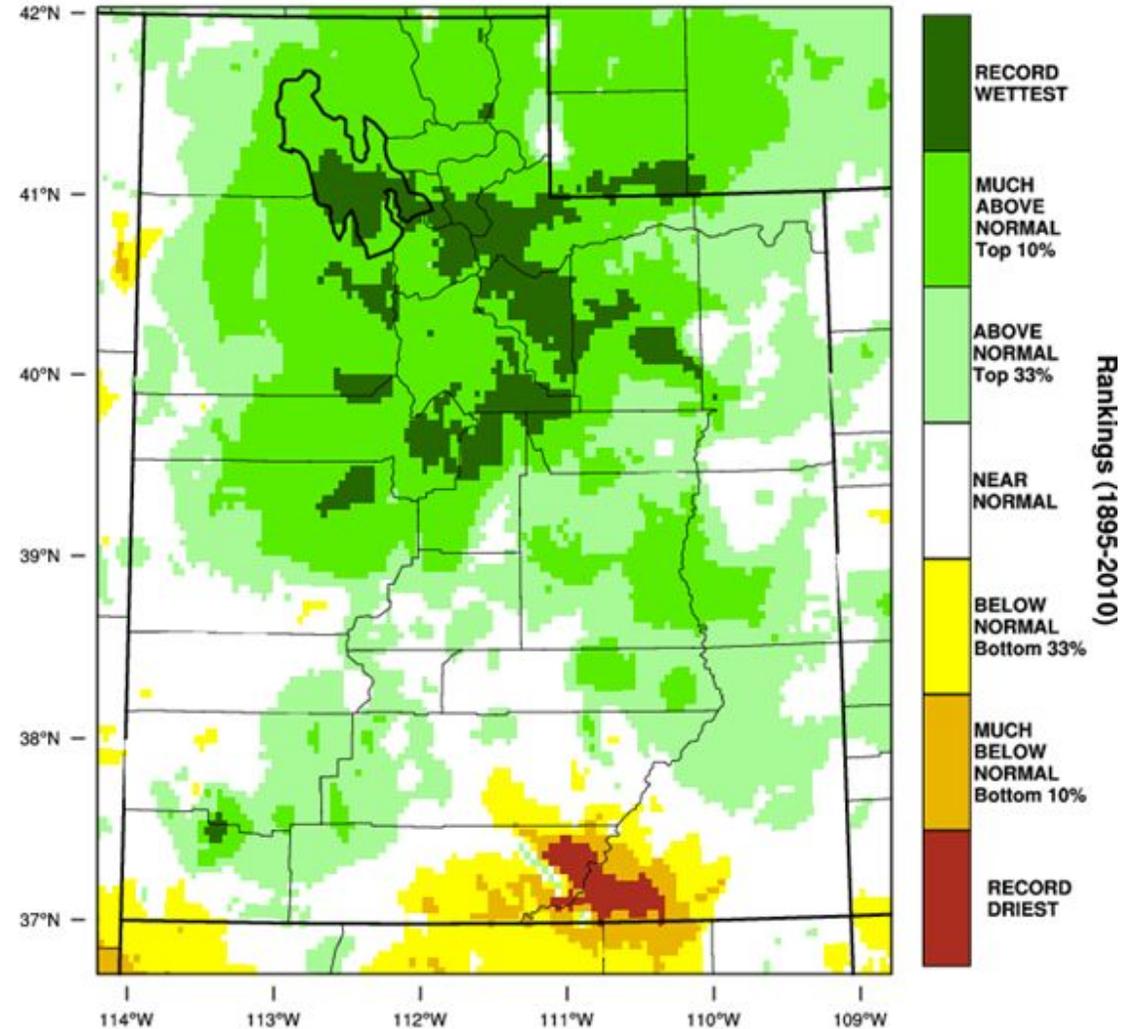
August's Climate Summary

Utah - Mean Temperature
August 2021 Percentile



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 SEP 2021

Utah - Precipitation
August 2021 Percentile



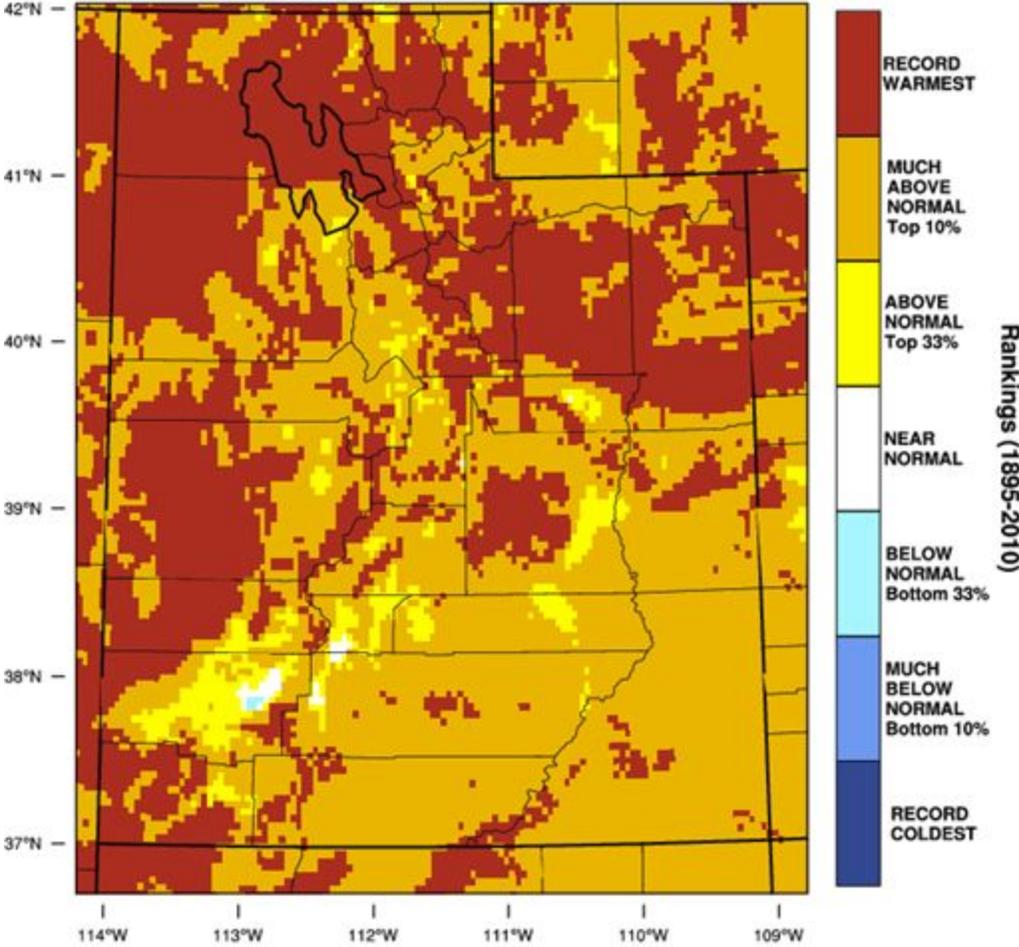
WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 SEP 2021

Agency - Utah Climate Center

Presenter - Jon Meyer

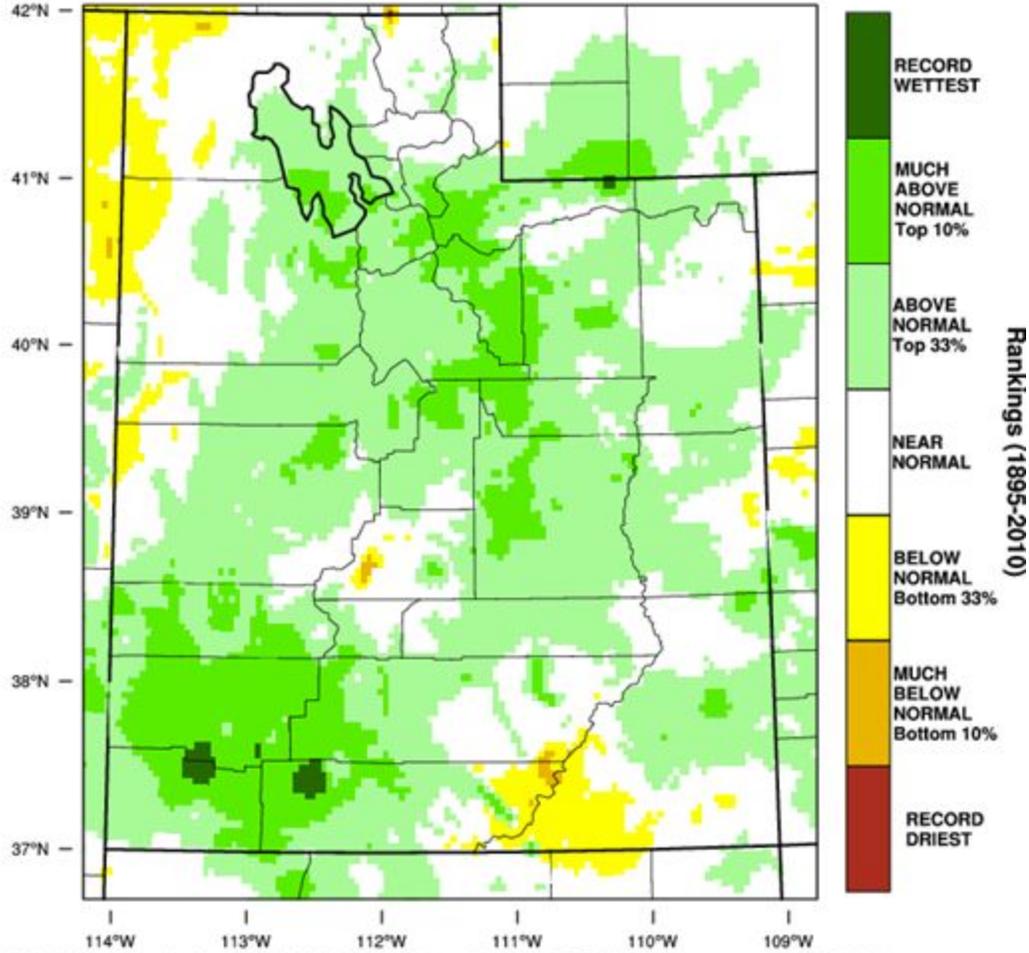
Summer Climate Summary (June-August)

Utah - Mean Temperature
June-August 2021 Percentile



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 SEP 2021

Utah - Precipitation
June-August 2021 Percentile



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 SEP 2021

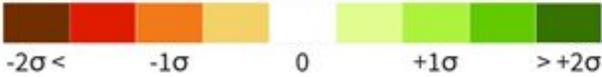
4-week Evaporative Demand Drought Index

U.S. Vegetation and Drought

[Evaporative Stress Index](#) [VegDRI](#) [Vegetation Health Index](#)

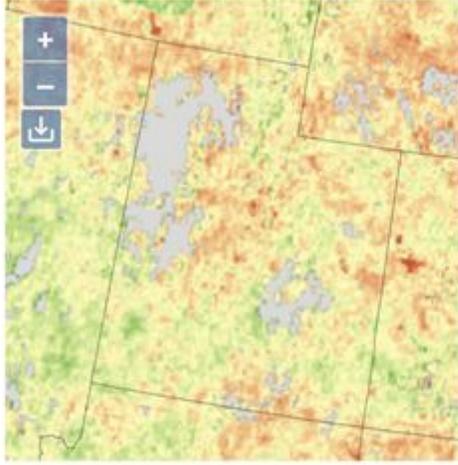
The Evaporative Stress Index (ESI) describes temporal anomalies in evapotranspiration (ET), highlighting areas with anomalously high or low rates of water use across the land surface. The ESI also demonstrates capability for capturing early signals of "flash drought," brought on by extended periods of hot, dry, and windy conditions leading to rapid soil moisture depletion. [Learn more.](#)

Standardized ET/PET Anomalies

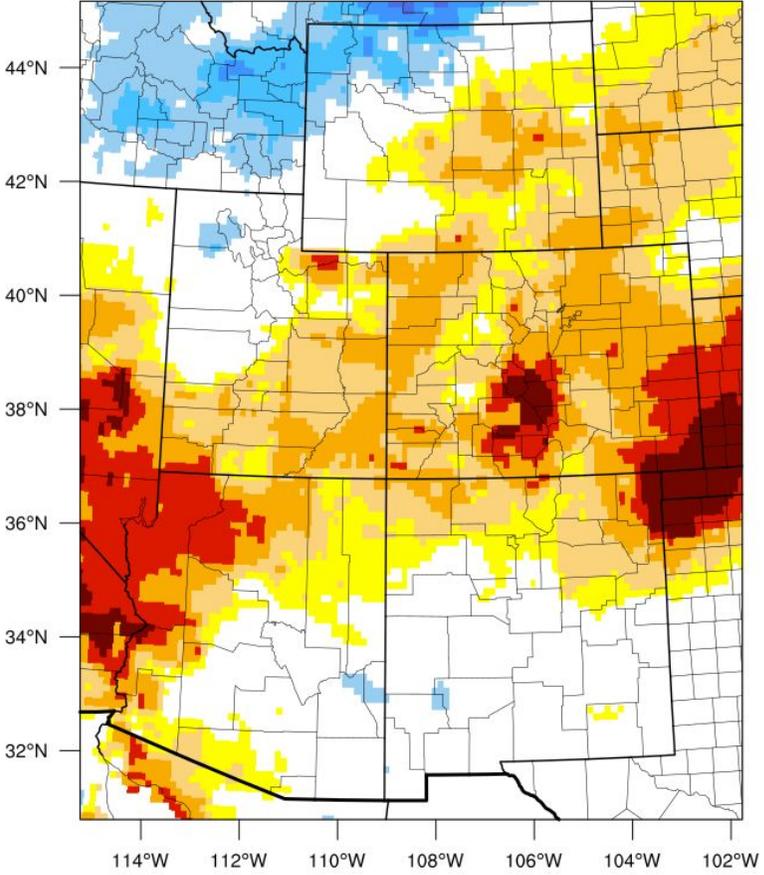


$-2\sigma <$ -1σ 0 $+1\sigma$ $>+2\sigma$

*Currently, data are only available for the contiguous U.S.
Source(s): [NASA SERVIR](#)



2-week EDDI categories for August 30, 2021



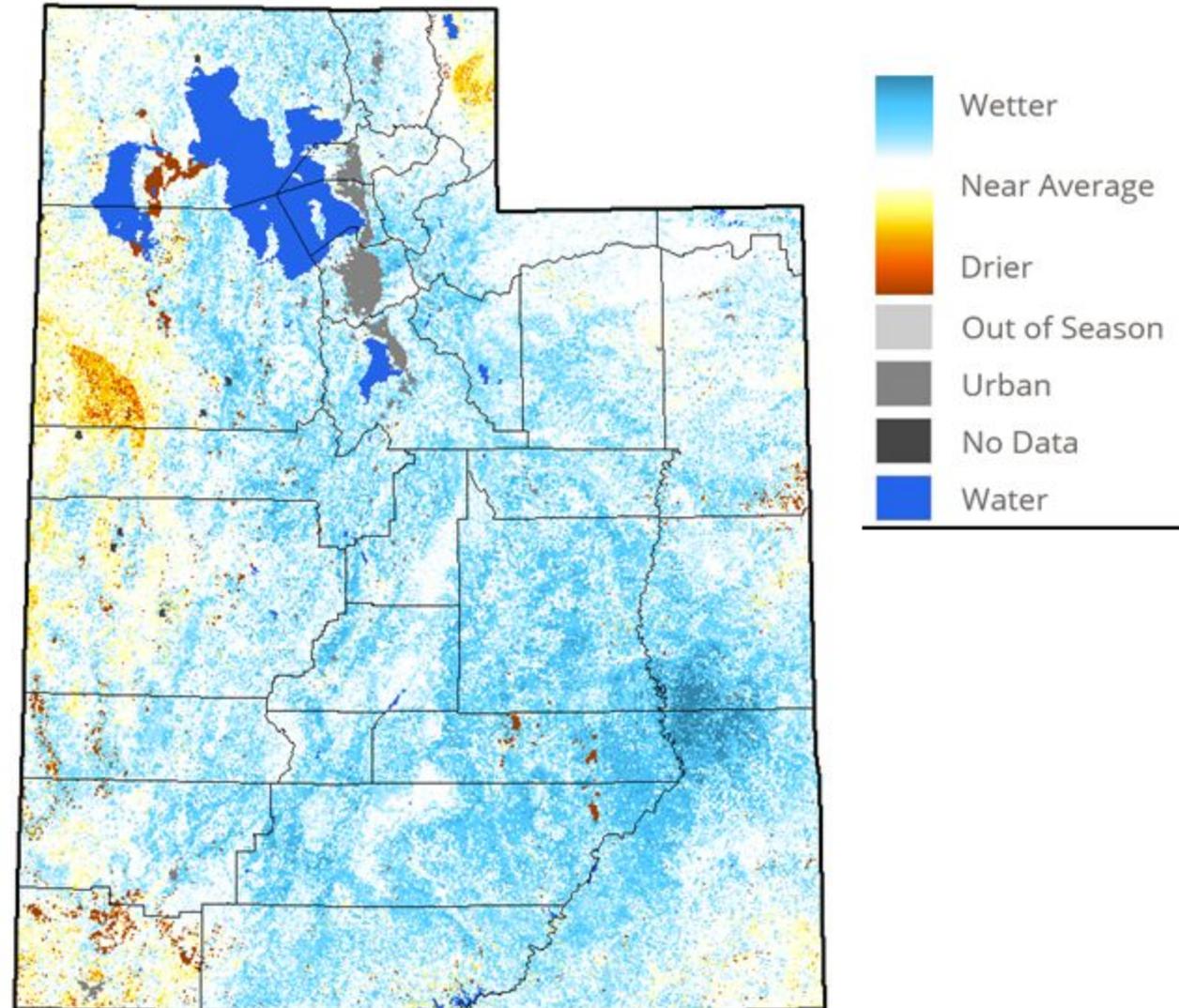
Drought categories **Wetness categories**

ED4 ED3 ED2 ED1 ED0 EW0 EW1 EW2 EW3 EW4

100% 98% 95% 90% 80% 70% 30% 20% 10% 5% 2% 0%
(EDDI-percentile category breaks: 100% = driest; 0% = wettest)

Generated by NOAA/ESRL/Physical Sciences Laboratory

Quick Drought Response Index (QuickDRI)



Tabular weather station data

U.S. Vegetation and Drought

[Evaporative Stress Index](#) [VegDRI](#) [Vegetation Health Index](#)

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Standardized ET/PET Anomalies



*Currently, data are only available for the contiguous U.S.

Source(s): [NASA SERVIR](#)



U.S. Vegetation and Drought

[Evaporative Stress Index](#) [VegDRI](#) [Vegetation Health Index](#)

The Vegetation Drought Response Index (VegDRI) is a weekly depiction of drought's effects on vegetation stress across the contiguous United States, produced by the National Drought Mitigation Center, the U.S. Geological Survey's National Center for Earth Resources Observation and Science, and the High Plains Regional Climate Center. [Learn more.](#)

Drought Conditions



Moist Conditions

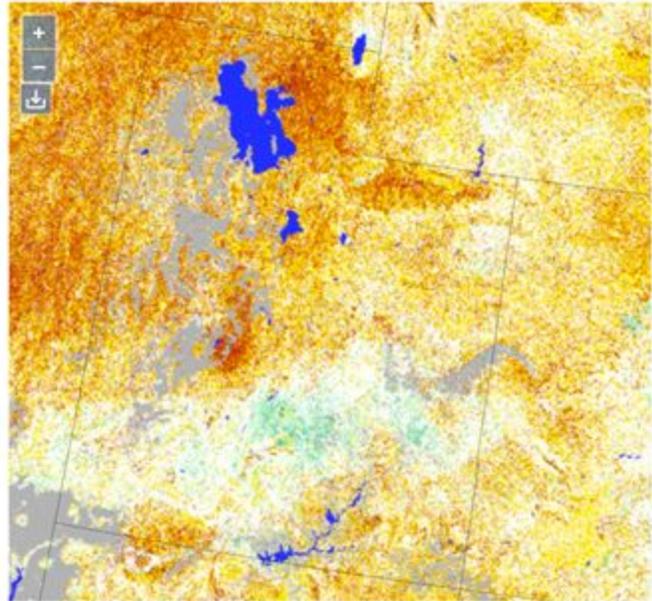


Other Conditions



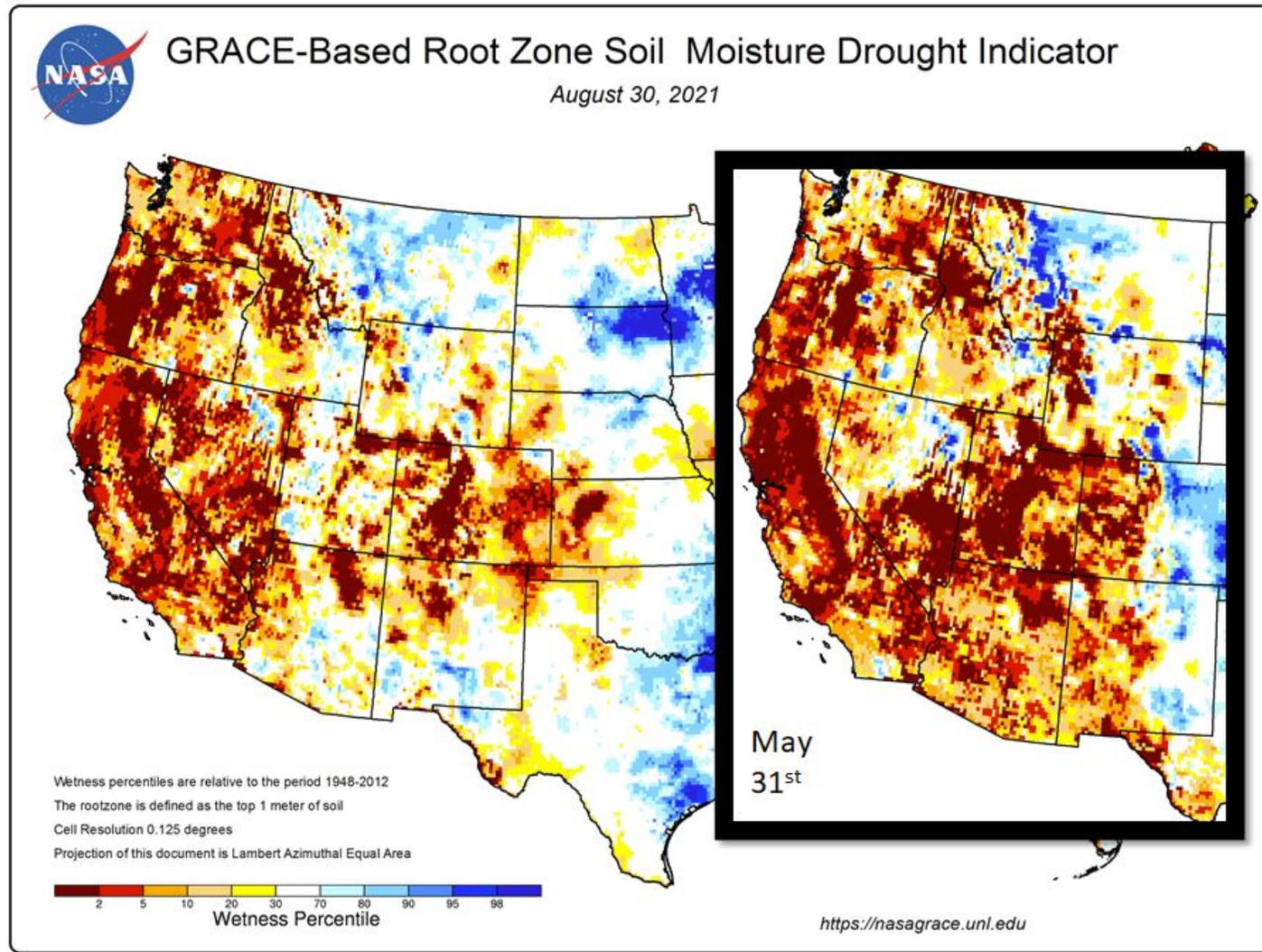
*Currently, data are only available for the contiguous U.S.

Source(s): [NDMC](#), [USGS](#), [HPRCC](#)



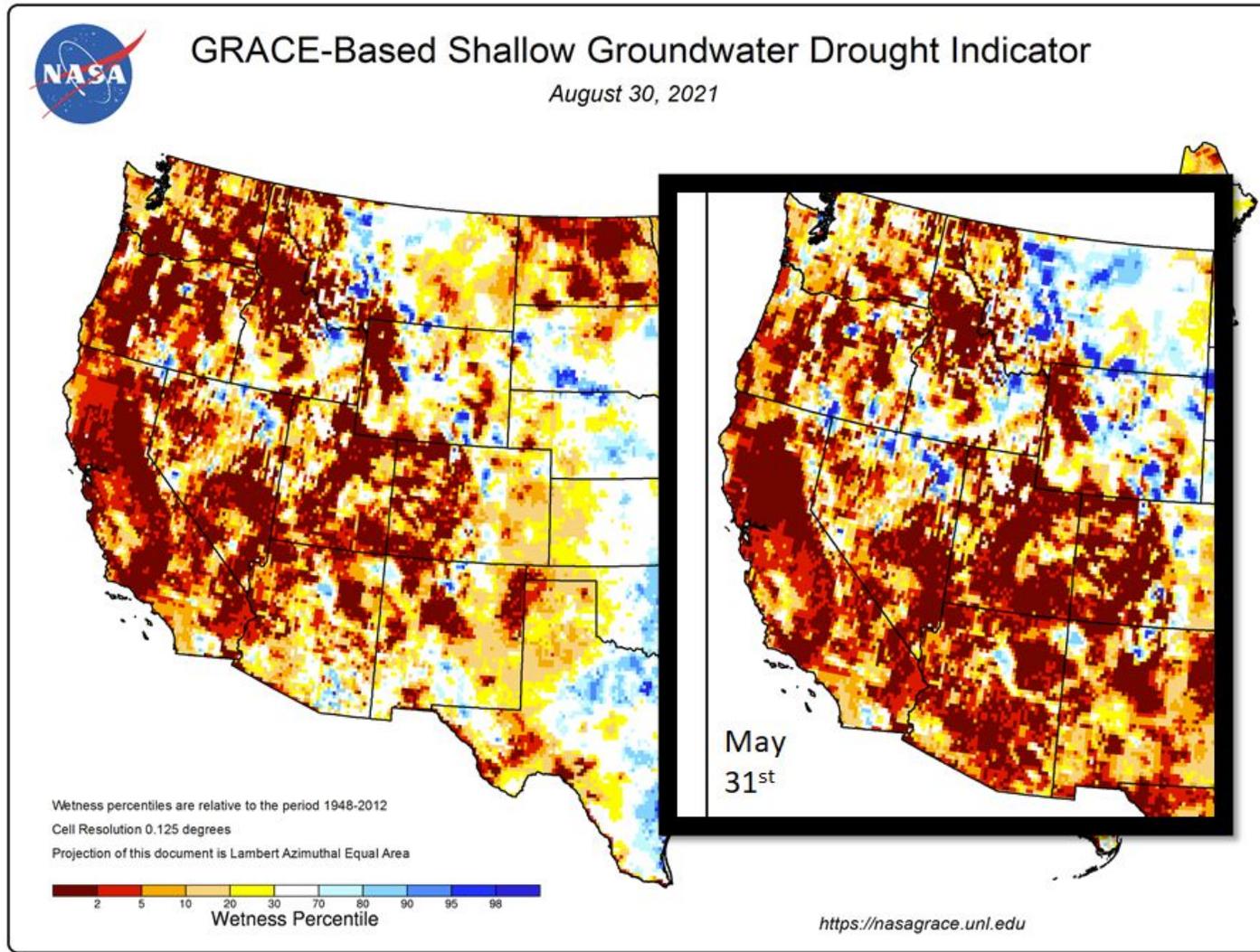
Updates Weekly - 09/07/21

GRACE Satellite Observations



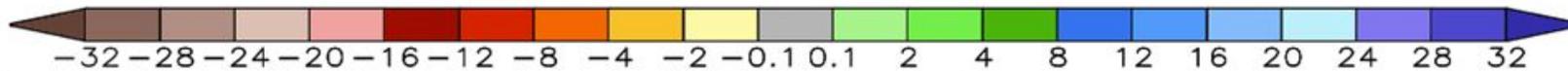
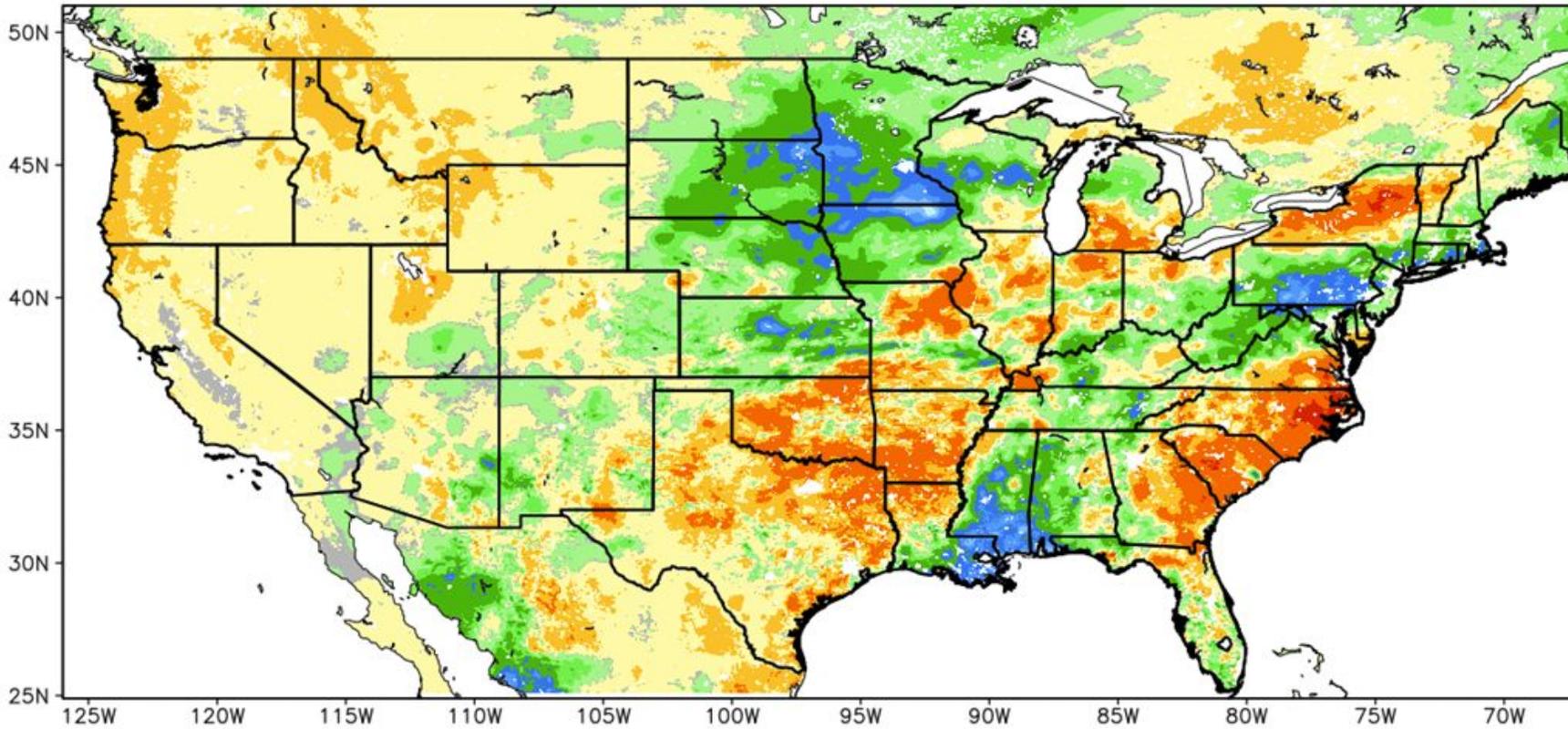
Summer Monsoon rains have greatly improved the root-zone soil moisture conditions!

GRACE Satellite Observations



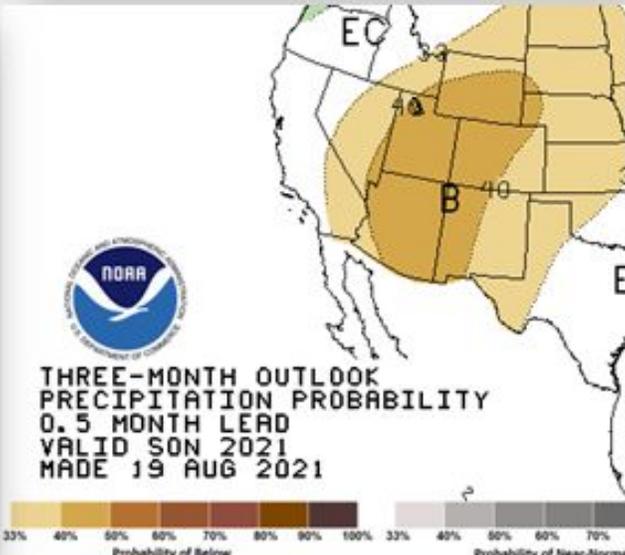
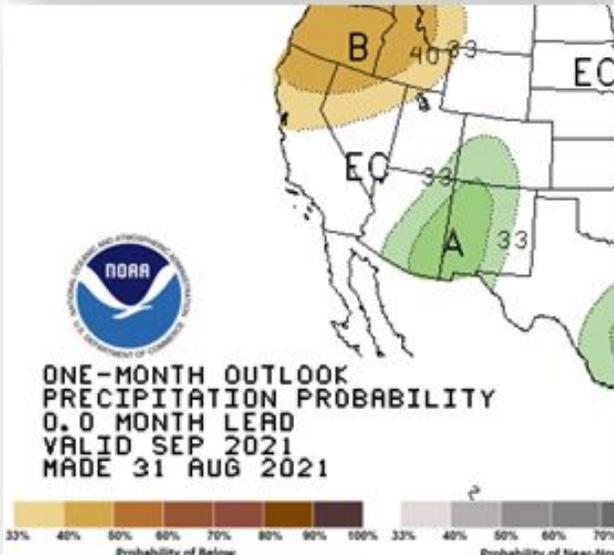
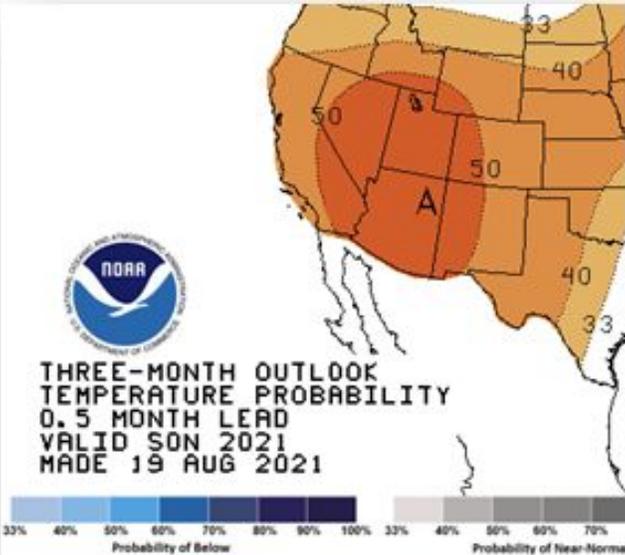
Despite an active monsoon, very little improvement to ground water conditions have been observed.

2-Week Difference in Column Relative Soil Moisture (%) valid 00z 07 Sep 2021

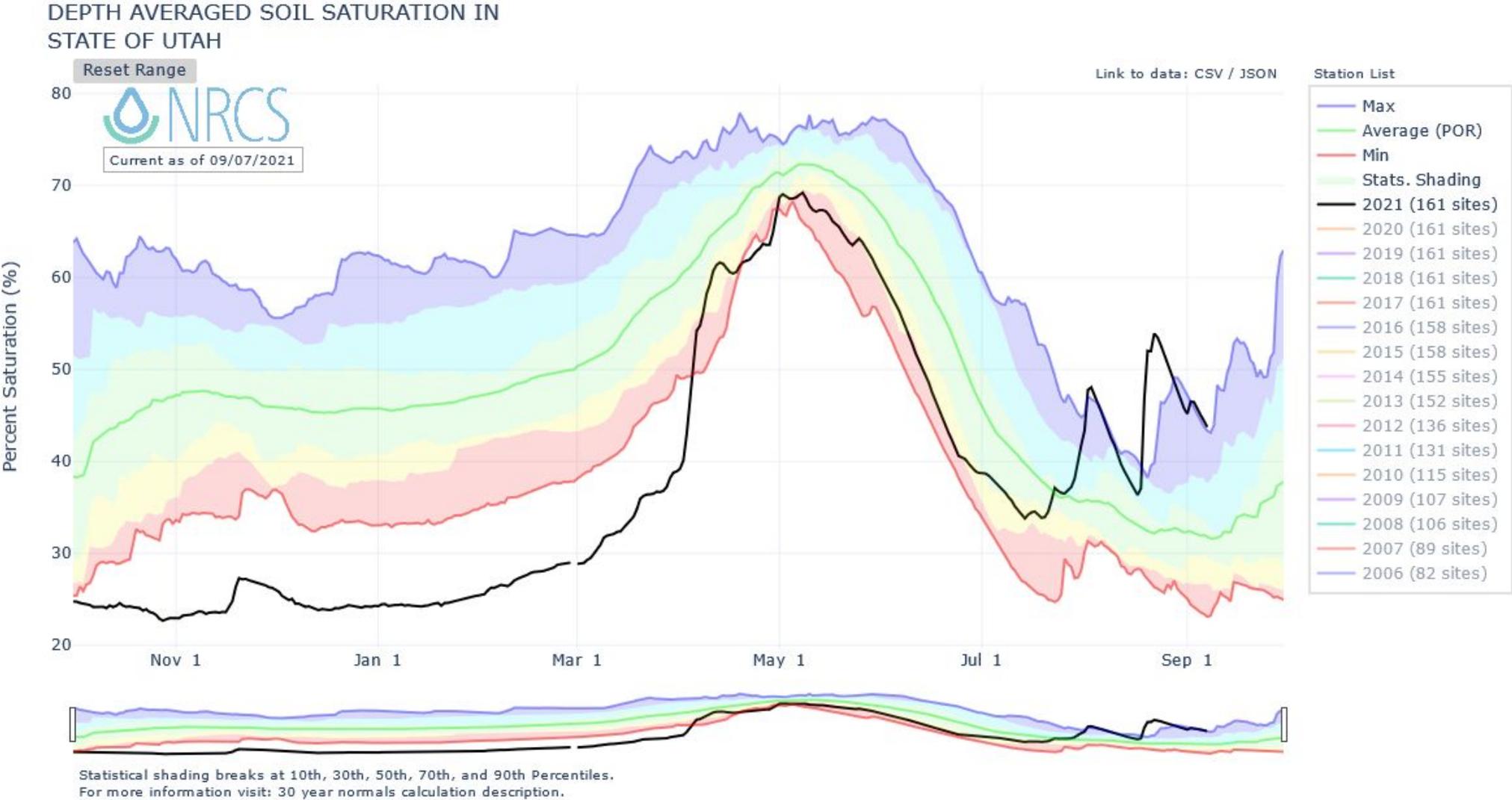


****NOTE****
****Experimental****

CPC 1-month (sept.) & 3-month (S-O-N) outlooks

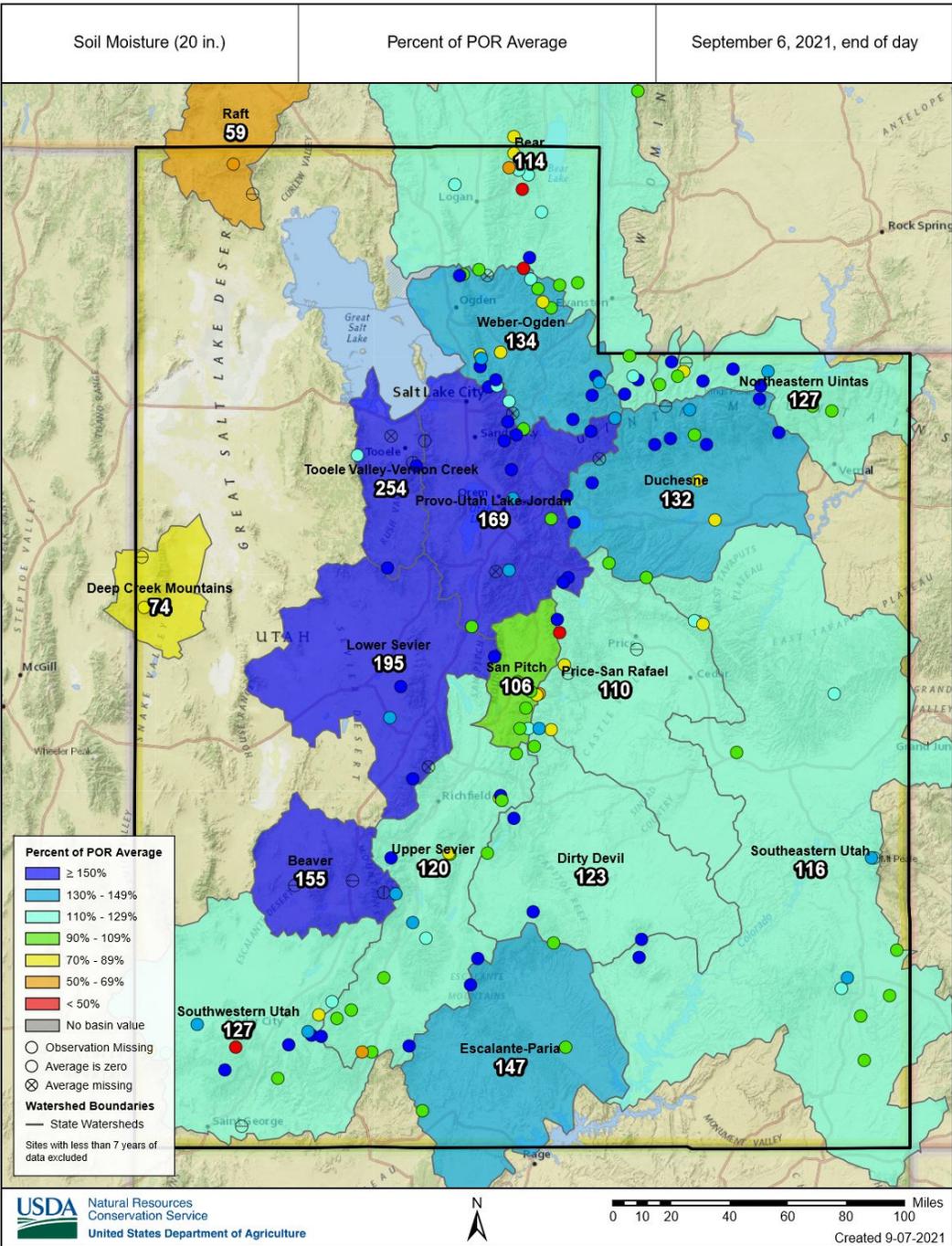


Soil Moisture



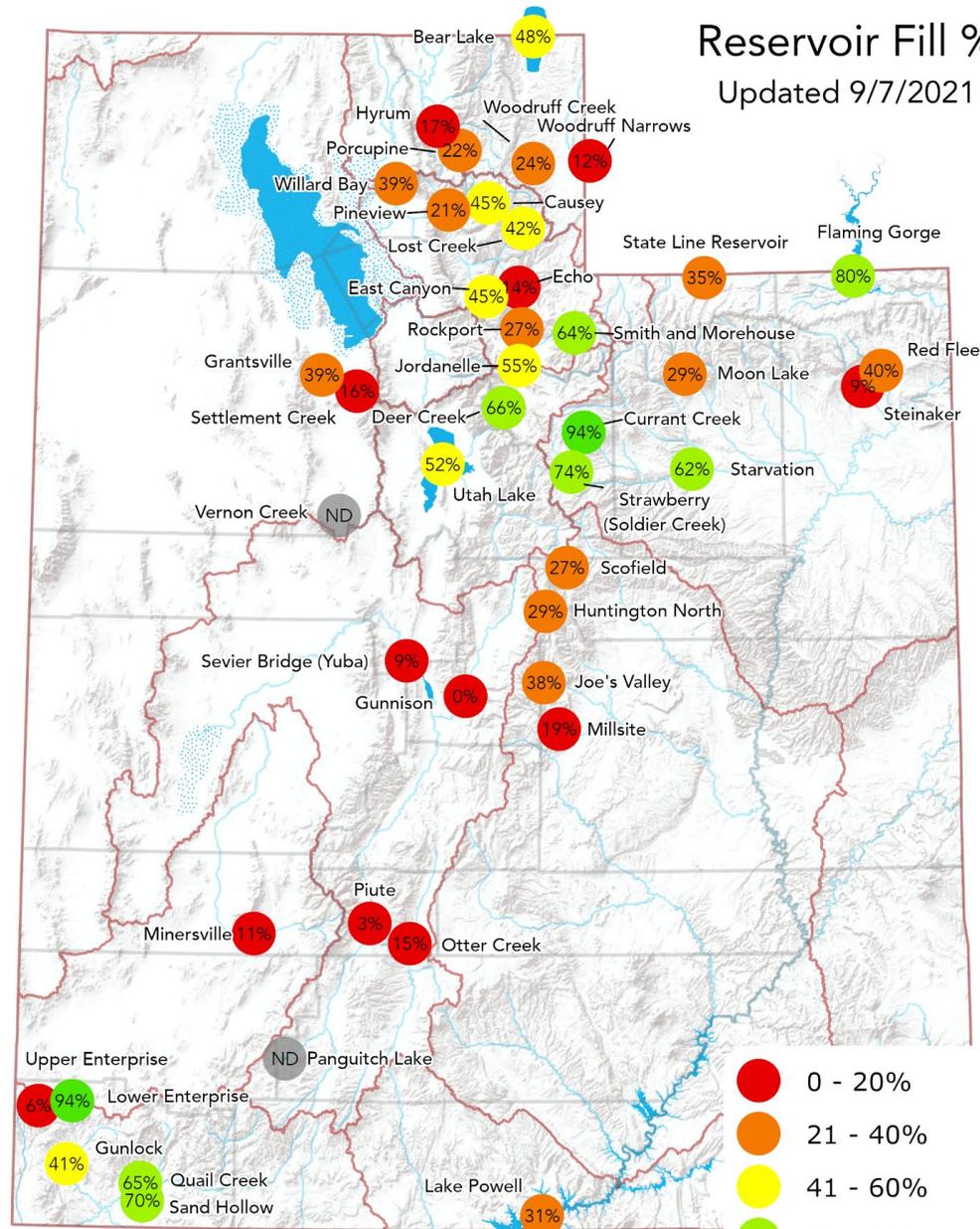
Soil Moisture

20" sensor depth
SNOTEL & SCAN sites



Reservoir Fill %

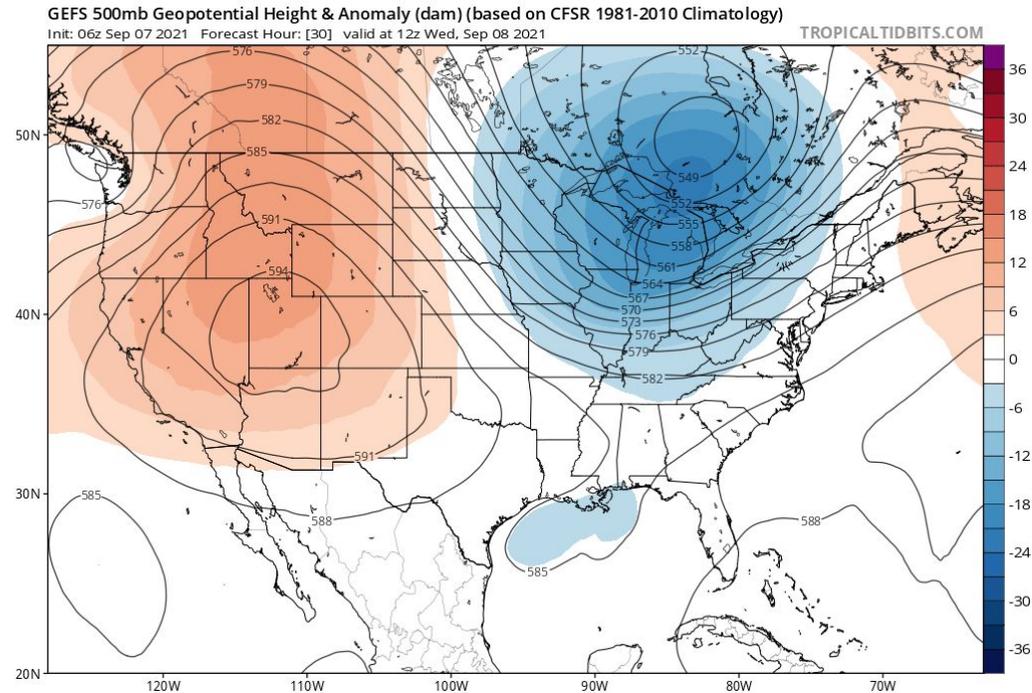
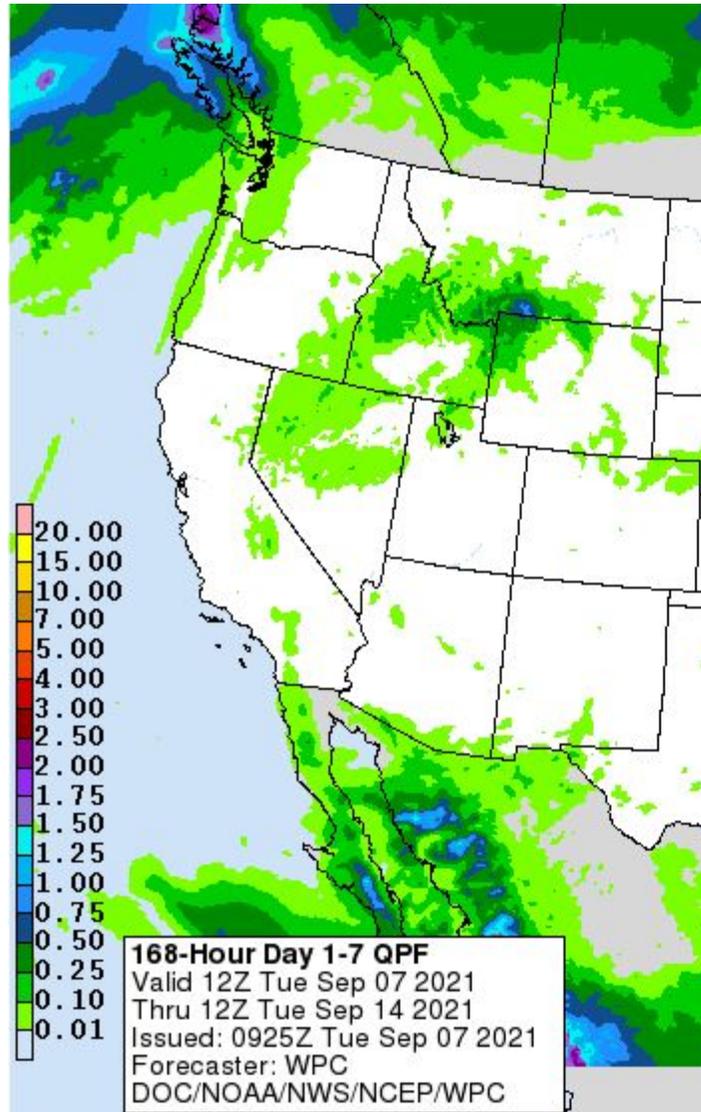
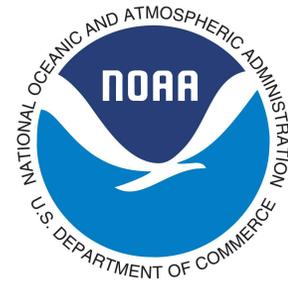
Updated 9/7/2021



Data Sources
 Bureau of Reclamation, Bear River Commission,
 Emery Water Conservancy District,
 Sevier River Water Users Association,
 Washington County Water Conservancy District

Agency - Division of Water Resources
 w/BOR & NRCS data
 Presenter - Laura Haskell

Weather Forecast Office Utah Day 1-7 Outlook

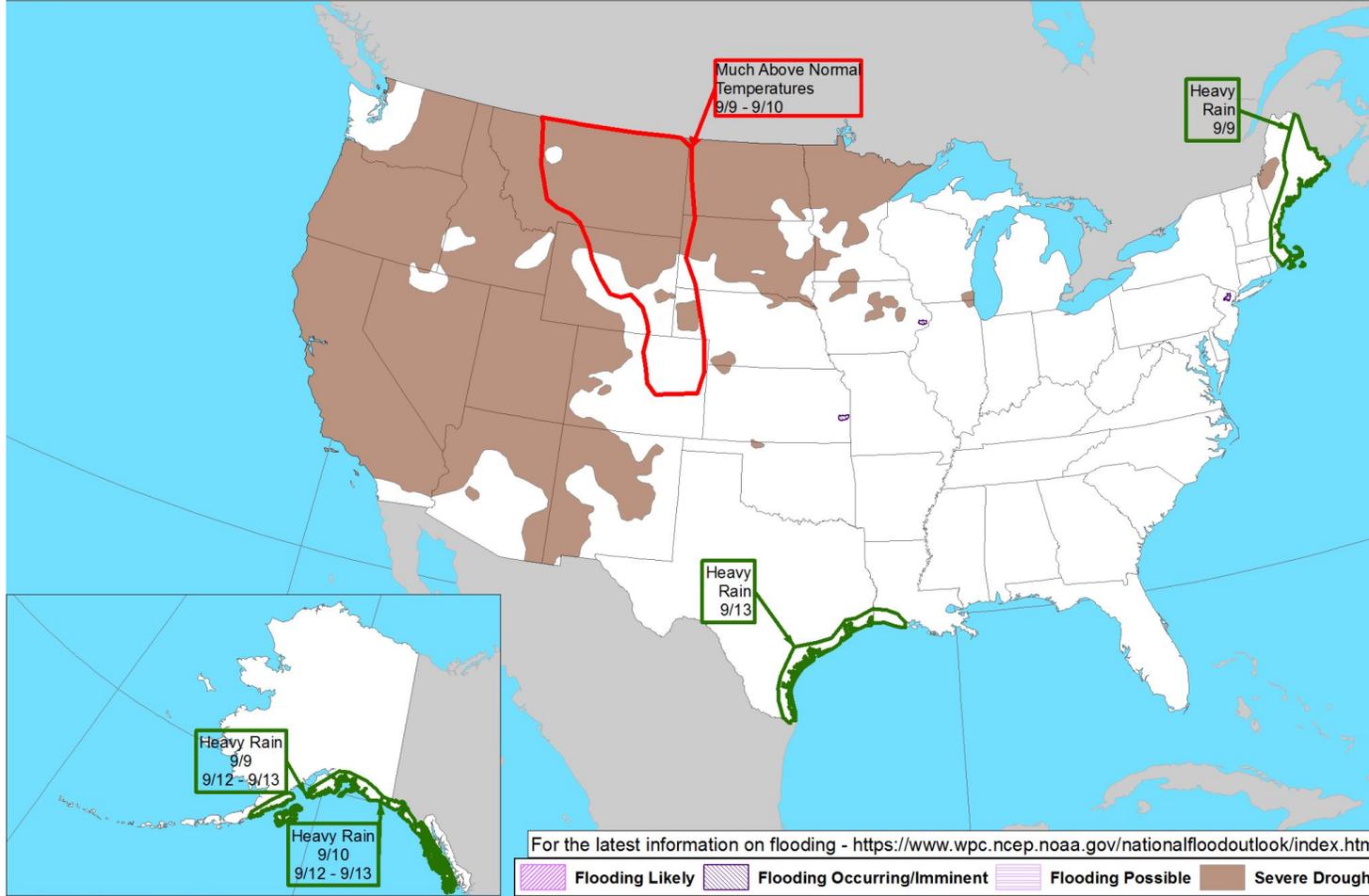


- Well above normal temperatures through Thursday (8-13F above climo).
- Temperatures cool to near seasonal values for the weekend (in the north).
- Scattered showers and storms across the north Friday-Saturday.
- Isolated showers and storms possible Sunday-Tuesday.

Weather Prediction Center U.S. Day 3-7 Hazards Outlook



Day 3-7 U.S. Hazards Outlook
Valid: 09/09/2021-09/13/2021



Weather Prediction Center

Made: 09/06/2021 3PM EDT

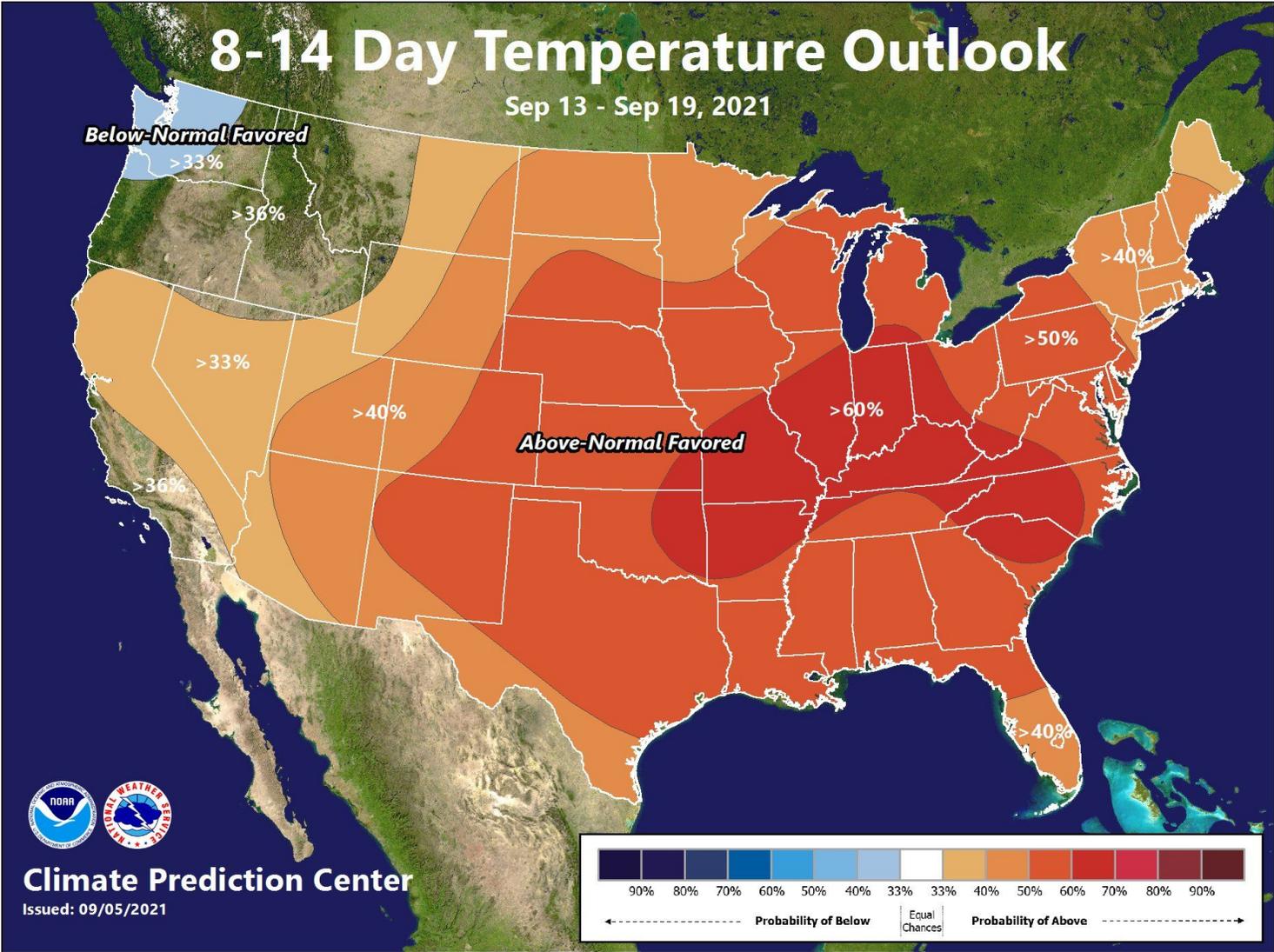
Follow us:

www.wpc.ncep.noaa.gov

Agency - National Weather Service Weather Forecast Office

Presenter - Glen Merrill

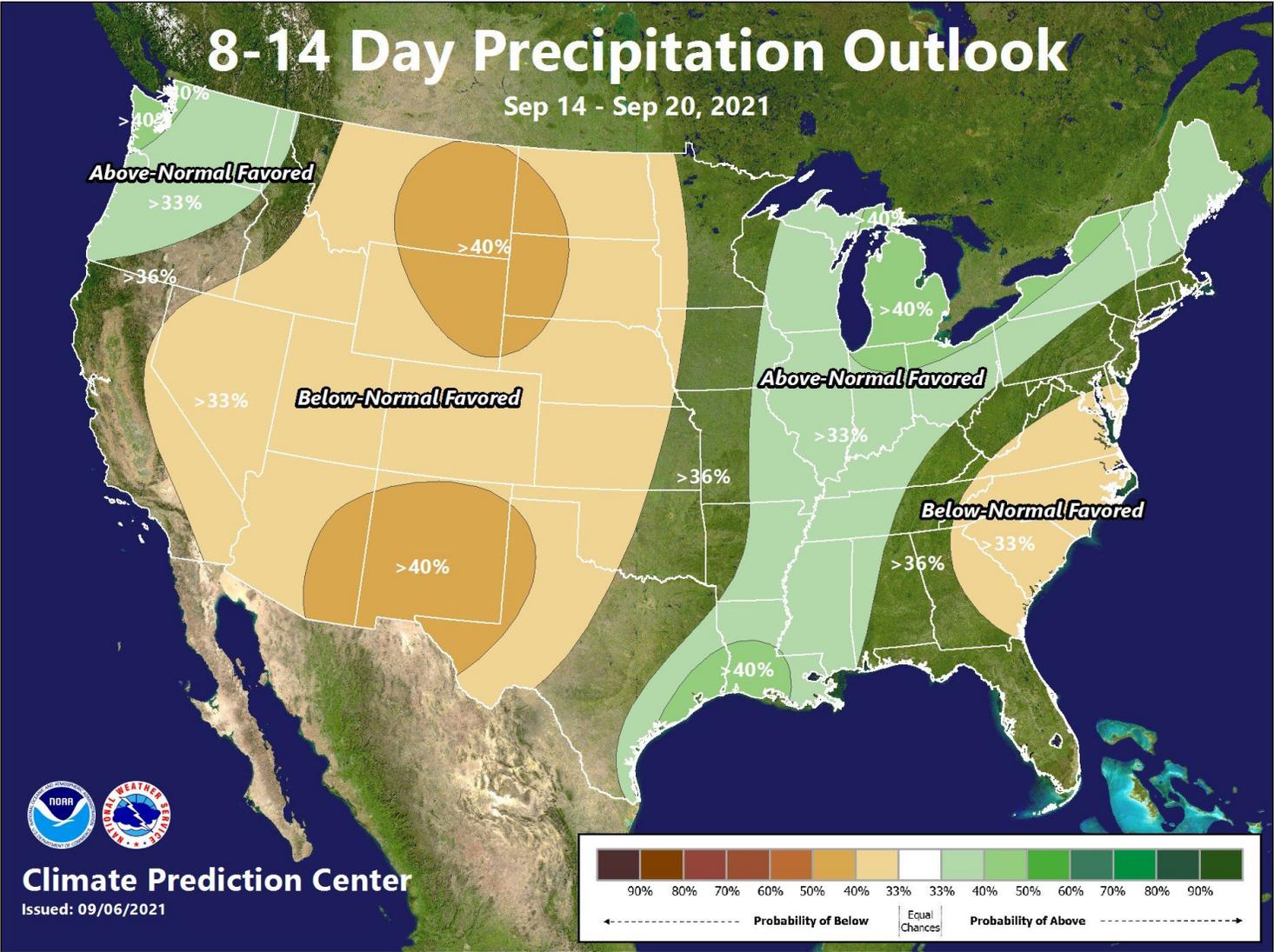
Climate Prediction Center 8 to 14 Day Outlooks - Temperature



Climate Prediction Center
Issued: 09/05/2021

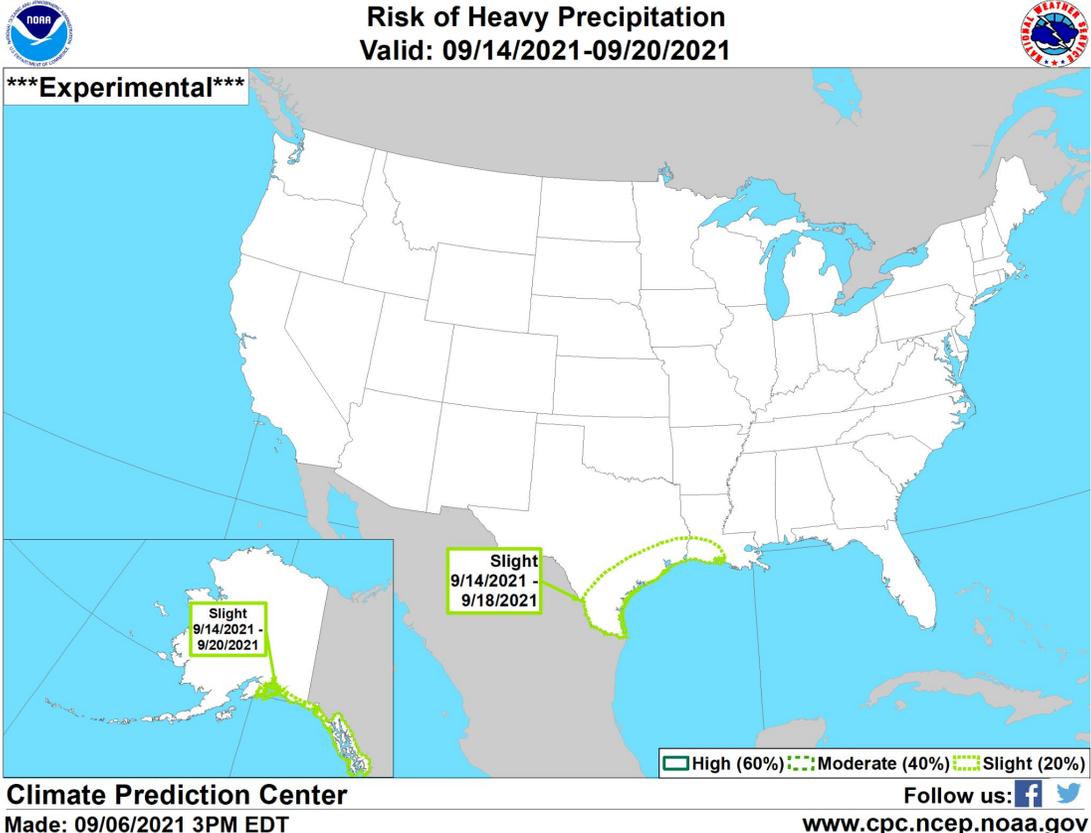
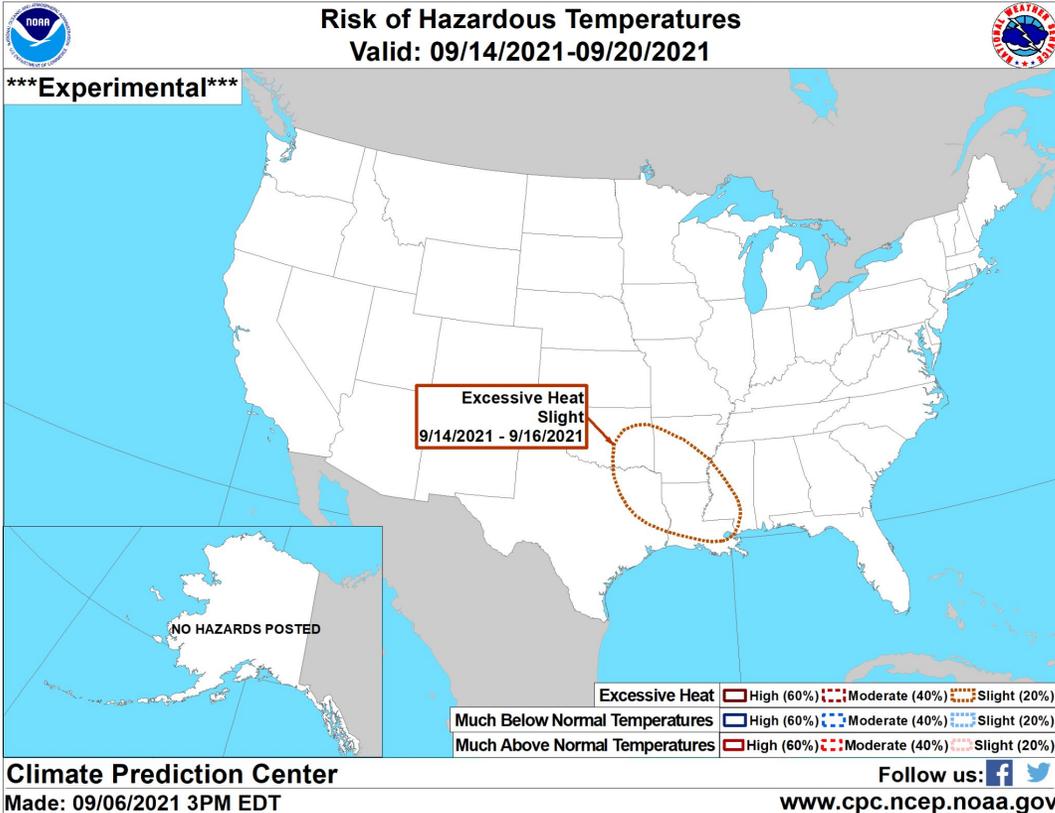
Agency - National Weather Service Weather Forecast Office
Presenter - Glen Merrill

Climate Prediction Center 8 to 14 Day Outlooks - Precipitation



Agency - National Weather Service Weather Forecast Office
Presenter - Glen Merrill

Climate Prediction Center U.S. Week-2 Hazards Outlook





Water Supply Forecasts - Reservoirs Inflows

Seasonal water supply forecasts have concluded for WY2021, however, adjusted flows and forecast for specific reservoirs illustrate the ongoing drought and low August flows with a couple of exceptions.

Lake Powell Unregulated Inflow 19% of Average

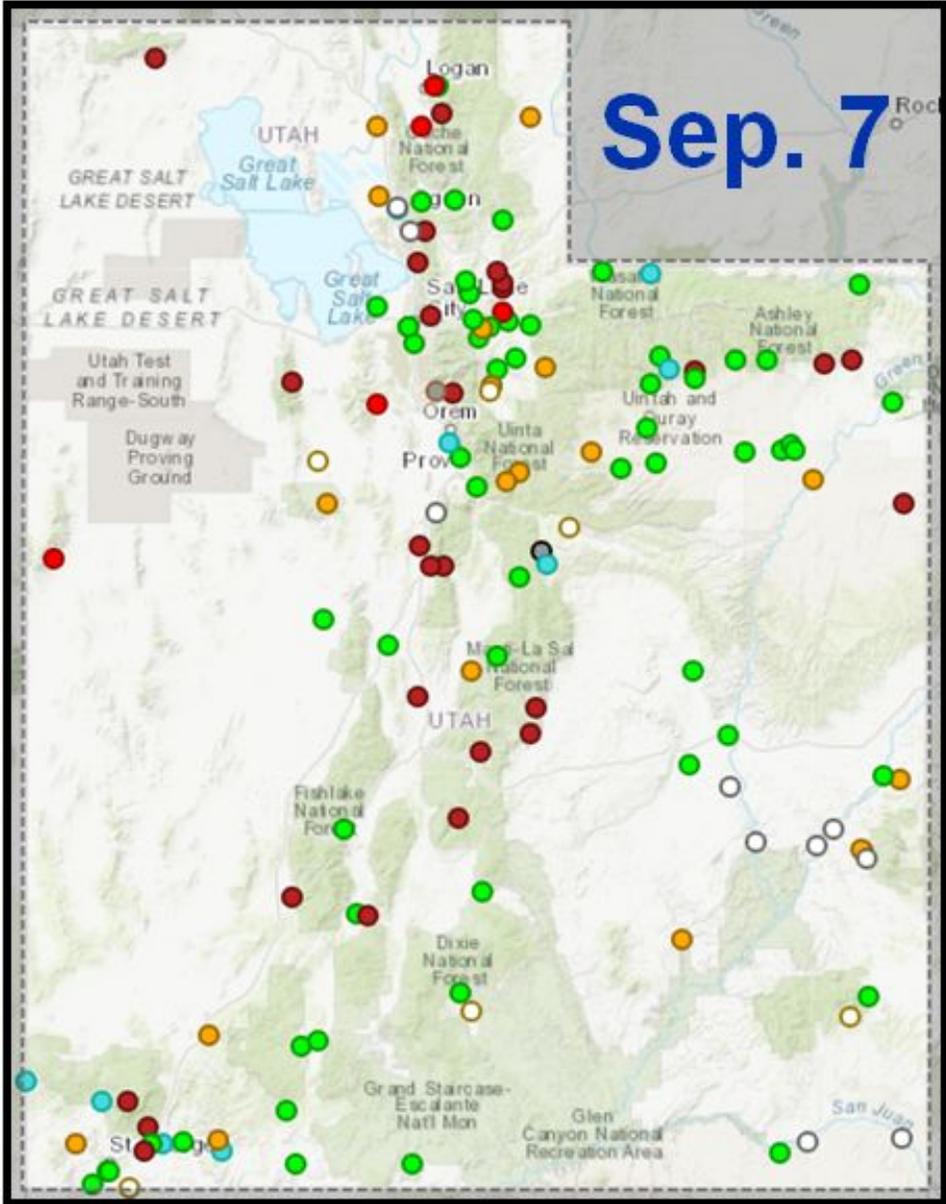
Fontenelle Unregulated Inflows 25% of Average

Flaming Gorge Unregulated Inflows 30% of Average

Deer Creek Reservoir Unregulated Inflows 55% of Average

Utah Lake Unregulated Inflows 113% of Average (Historic August Rains)

Current Streamflow Conditions



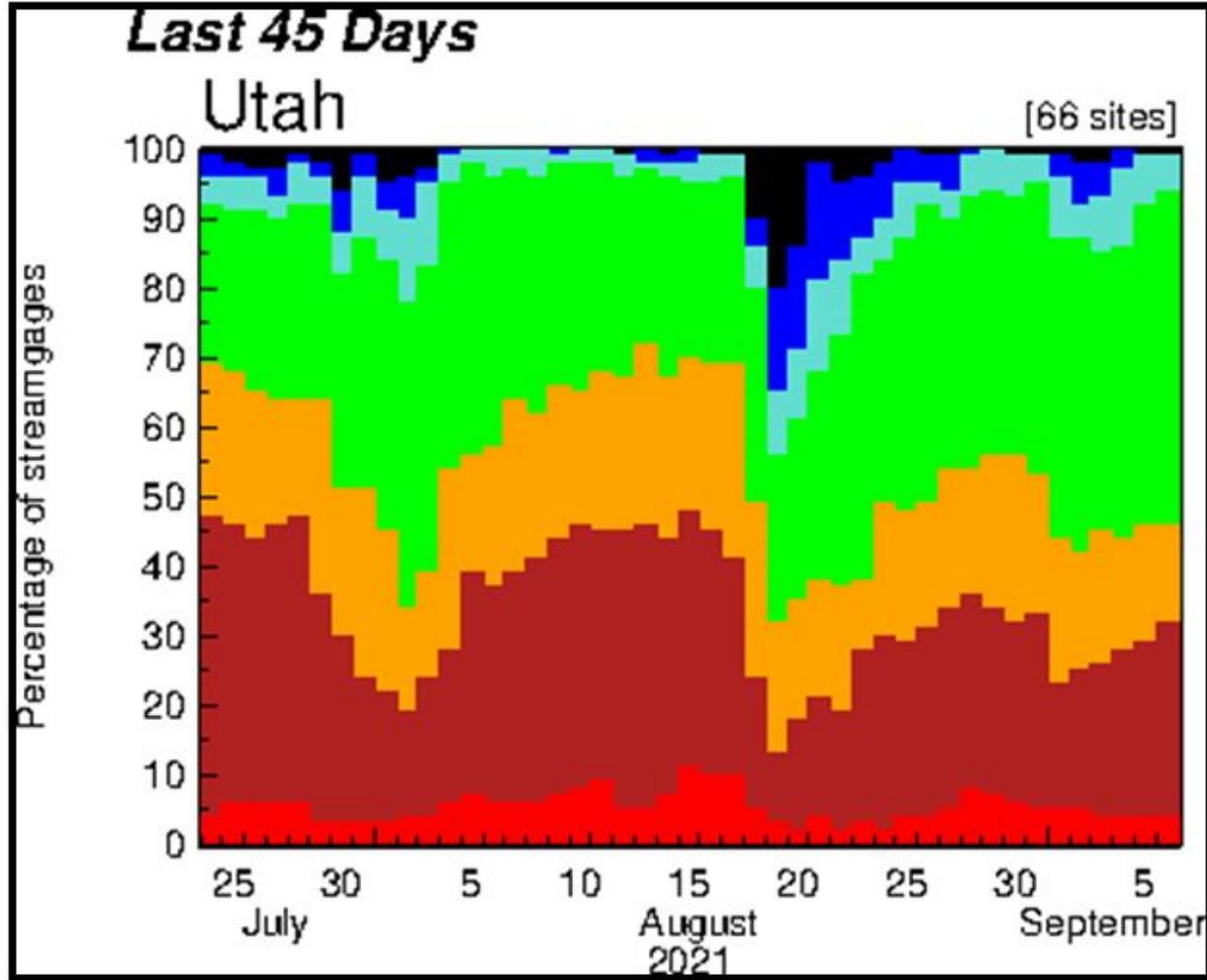
Day-of-Year Status	# Gages	% Gages
All-time high for this day-of-year	0	0.0%
Much above normal for this day-of-year	0	0.0%
Above normal for this day-of-year	10	7.3%
Normal for this day-of-year	58	42.3%
Below normal for this day-of-year	19	13.9%
Much below normal for this day-of-year	27	19.7%
All-time low for this day-of-year	5	3.6%
Not ranked - insufficient record	11	8.0%
Not ranked - no recent measurement	1	0.7%
Not ranked - stream not flowing	6	4.4%

Streamflow: Status

- Above flood stage
- All-time high for this day (100th percentile (maximum))
- Much above normal (>90th percentile)
- Above normal (76th – 90th percentile)
- Normal (25th – 75th percentile)
- Below normal (10th – 24th percentile)
- Much below normal (<10th percentile)
- All-time low for this day (0th percentile (minimum))
- Not flowing
- Not ranked
- Measurement flag
- Recent measurement unavailable

Sites must have at least 10 years of record to be ranked on this graphic

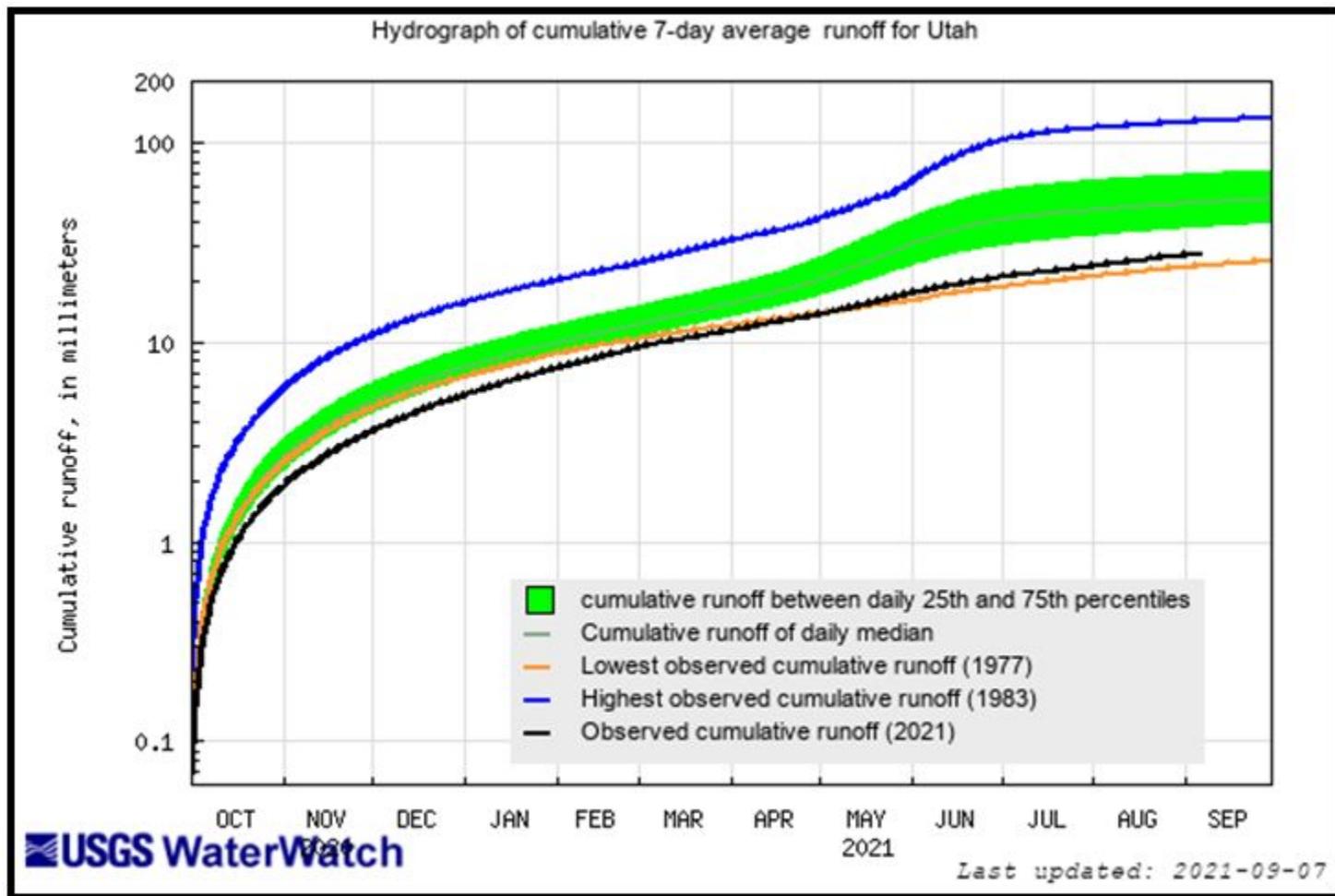
Current Streamflow Conditions



Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		

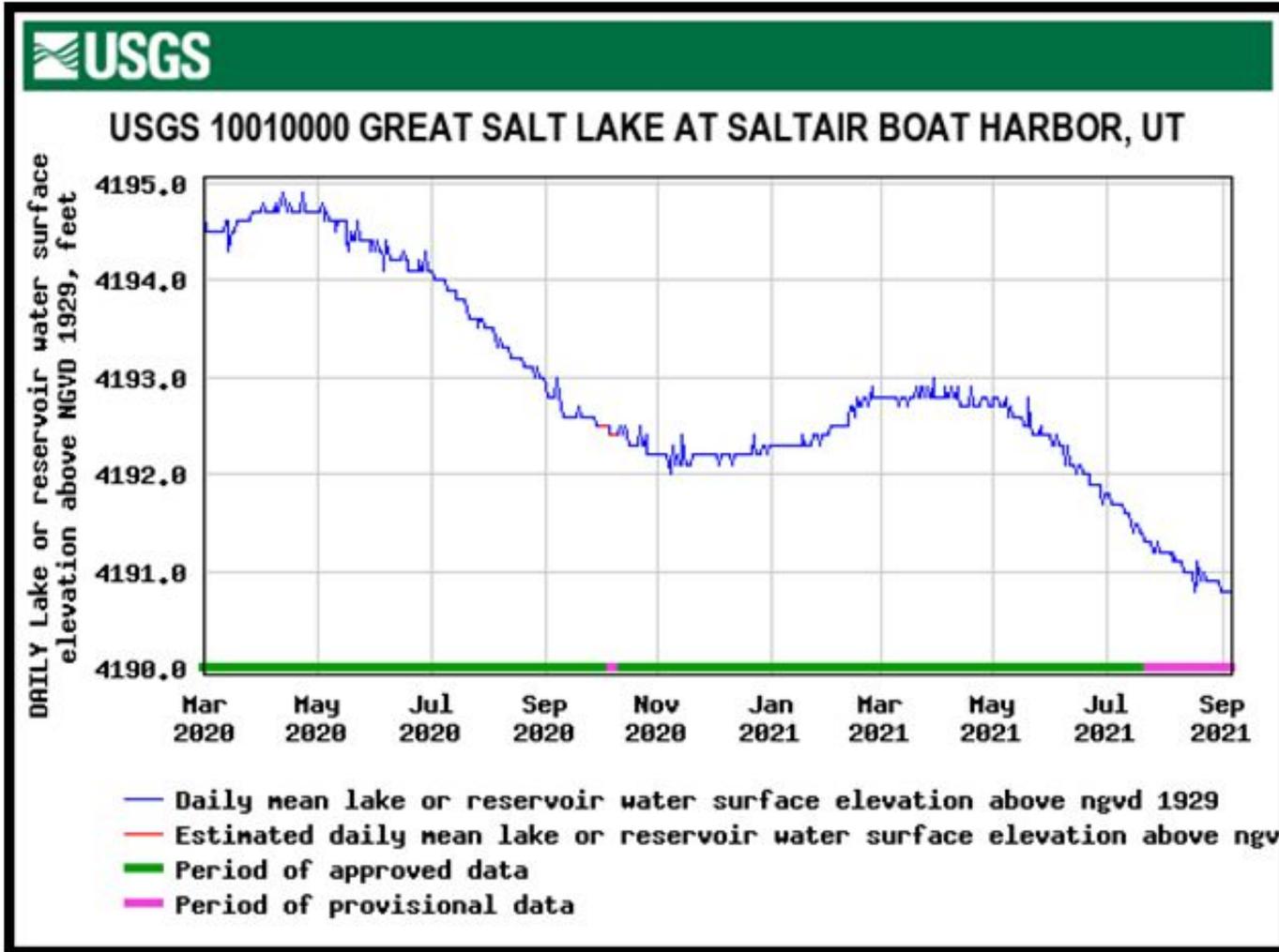
- ❑ Mean daily Streamflow compared to historical streamflow for the day of the year
- ❑ Sites must have at least 30 years of record to be included in this graphic

Cumulative Streamflow



□ Cumulative 7-day average runoff for water year 2021 is near the lowest on record

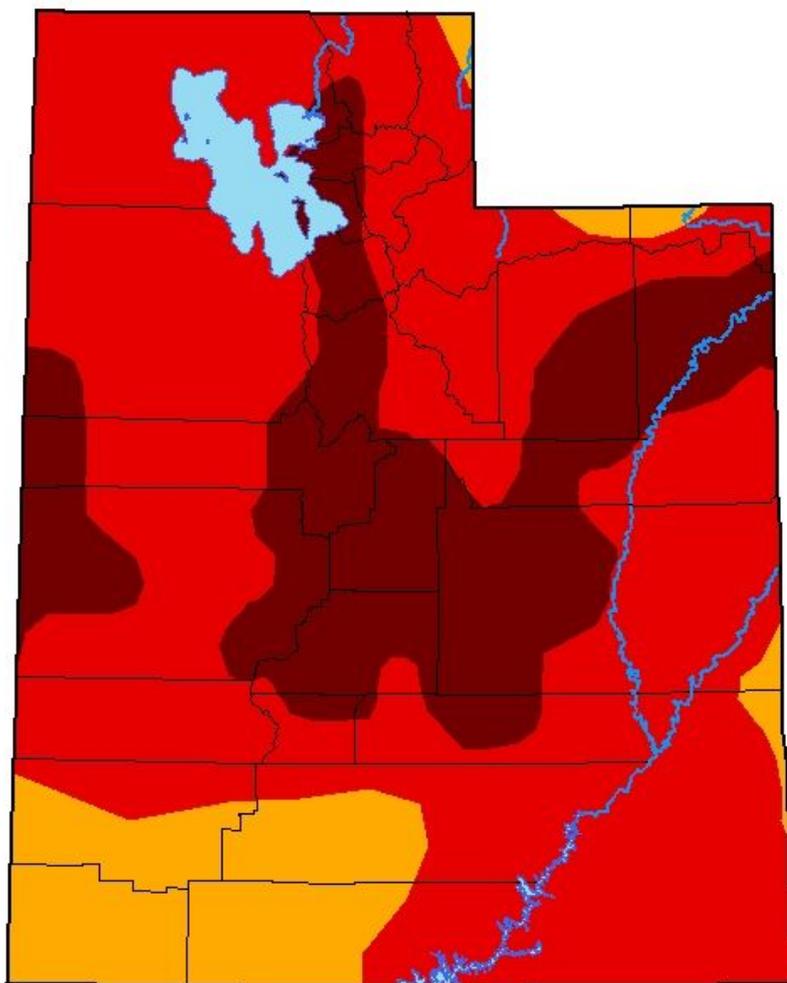
Great Salt Lake Water Surface Elevation



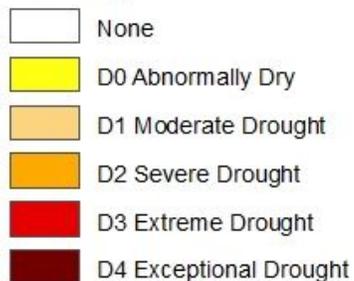
- ❑ Mean daily value yesterday 4,190.8'
- ❑ Broke historic low record on 7/21/2021 when daily mean value = 4,191.3'
- ❑ Site has data record dating back to 1847

U.S. Drought Monitor Utah

August 31, 2021
(Released Thursday, Sep. 2, 2021)
Valid 8 a.m. EDT



Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

David Simeral
Western Regional Climate Center



droughtmonitor.unl.edu

